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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,253	02/06/2006	Hideyuki Takai	3273-0218PUS1	3053
2292 7590 11/12/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
MCCULLEY, MEGAN CASSANDRA				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
11/12/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/567,253

Applicant(s)

TAKAI ET AL.

Examiner

Megan McCulley

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

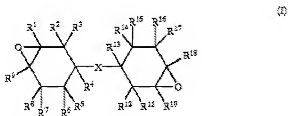
Claims 1, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takai (US 2003/0059618) in view of Kawamura et al. (US 2002/0117066).

Regarding claims 1 and 8: Takai teaches a composition comprising an epoxy resin composition and a cationic polymerization initiator (paras. 35-36) which releases a cation species upon heating to initiate cationic polymerization (para. 31, 33). The composition comprises 10-100 parts by weight of an alicyclic epoxy compound which has no ester groups (formula (I)), and 0 to 90 parts by weight of another epoxy

compound. This overlaps the claimed percentages of the ester-free alicyclic epoxy compound and the other epoxy compound. Also disclosed is the cationic polymerization initiator in an amount of 0.05-5 parts by weight to 100 parts by weight of the epoxy resin (para. 86), which overlaps the claimed range (paras. 35-36). Takai further teaches a compound of a copolymer having at least one glycidyl group and/or alicyclic epoxy group in the molecule in an amount of 5-20 parts by weight to 100 parts by weight of the sum of the two epoxy compounds (para. 175) which overlaps the claimed range. The copolymer is prepared by polymerizing epoxy-containing monomer/glycidyl acrylate monomers, which makes it an acrylic resin (para. 135). Takai further teaches the copolymer containing glycidyl acrylate monomers also contains hydroxyethyl acrylate, which would give the copolymer hydroxyl groups (para. 137). Takai also teaches the concentration of epoxy groups in the copolymer is 0.1-7.0 equivalents/kg (para. 142), which is calculated as 0.16-11.2% oxirane oxygen content.

Takai does not teach a polymerization inhibitor in the epoxy containing acrylic resin. However, Kawamura et al. teaches a polymerization inhibitor in an epoxy containing acrylic resin (para. 190). Takai and Kawamura et al. are analogous art since they are both concerned with the same field of endeavor, namely making and using epoxy containing acrylic resins. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the polymerization inhibitor of Kawamura et al. with the epoxy containing acrylic resin of Takai and would have been motivated to do so to prevent the undesirable thermal polymerization during preparation, as evidenced by Kawamura et al. (para. 129).

Regarding claim 4: Takai teaches the compound:



[0036] (wherein X represents a divalent group selected from oxygen atom, sulfur atom, $-\text{SO}-$, $-\text{SO}_2-$, $-\text{CH}_2-$, $-\text{C}(\text{CH}_3)_2-$, $-\text{CBr}_2-$, $-\text{C}(\text{CBr}_3)_2-$, $-\text{C}(\text{CF}_3)_2-$, $-\text{C}(\text{CCl}_3)_2-$ and $-\text{CH}(\text{C}_6\text{H}_5)-$, or a single bond linking two alicyclic rings; and R^1 to R^{12} are the same or different and each represents hydrogen atom, halogen atom, a hydrocarbon group which may contain oxygen atom or halogen atom, and an alkoxy group which may have substituent groups); 0 to 90 parts by weight of a

X can be a single bond (paras. 35-36).

Regarding claim 7: Takai teaches heat curing the composition (abstract).

Response to Arguments

Applicant's arguments filed July 30, 2009 have been fully considered but they are not persuasive.

A) Applicant's argument that Takai does not teach a plate such as a replacement for glass substrates is not persuasive. This feature is not claimed. It is also intended use of the claimed composition. The composition limitations are met by Takai in view of Kawamura et al.

B) Applicant's argument that the intended use of glass replacement substrates is difficult to achieve using UV irradiation curing is not persuasive. This is an unclaimed processing step. The claimed composition is disclosed in the prior art as set forth above. The manner of curing the composition does not change the basic and material

characteristics of the starting composition. Further, Takai does teach heat curing as set forth in the abstract.

C) Applicant's argument that unexpected results are achieved by setting the epoxy containing acrylic resin to a range of 1-11.1 parts per 100 parts epoxy is not persuasive. Firstly, comparison must be made to the closest prior art (Takai) (see MPEP 716.02(e)). Comparing examples 1, 2, 3, 5 and 7 to the examples 4 and 6 in the instant specification cannot show comparison to the closest prior art since examples 1, 2, 3, 5 and 7 are not the same compositions disclosed in Takai. Further it is noted that the property of high optical transparency which the remarks state is unexpectedly achieved by examples 4 and 6 has a higher value in the comparative example 1 of the instant specification than in examples 4 and 6.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Thursday 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/M. M./
Examiner, Art Unit 1796